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ABSTRACT

The objectives for this study were to: (1) explore competing treatments for assisting students to identify plans, gather relevant and reliable information, and consider tentative choices which will enable them to make use of these decision-making skills outside the counseling treatment setting; (2) develop and assess the relative efficacy of a structured group interaction technique, a video-presented social modeling procedure and structured interaction; and (3) generate a body of data which will permit the stating and testing of subsequent research hypotheses thus contributing to the development of counseling theory. Eleventh grade males (80) were assigned to an experimental or a control group. The treatments were: (1) structured group interaction; (2) group social modeling; and (3) group social modeling plus structured interaction. Treatment outcomes were measured by administering to each student an attitude questionnaire, career planning inventory, vocational information survey, and a vocational planning questionnaire. Analysis of results show no significant differences among groups on any of the test scores. The author concludes that since no clear evidence of uniform positive treatment effects have been demonstrated, new treatment procedures must be developed which will have the necessary power to effect positive change. (RWP)

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PROMOTING ADOLESCENT DECISION MAKING SKILLS WITH GROUP SOCIAL MODELS AND STRUCTURED GROUP INTERACTION

A paper presented at
the annual meeting of
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PROMOTING ADOLESCENT DECISION MAKING SKILLS WITH GROUP SOCIAL MODELS AND STRUCTURED GROUP INTERACTION

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One of the major goals of counseling is to help students learn how to make good decisions (Gelatt, 1962; Katz, 1963; Krumboltz, 1966). For many students, this decision-making process includes considering a number of alternative courses of action, searching for relevant information about the possible outcomes of each alternative, and evaluating the information obtained in light of personal value judgments in order to arrive at the most worthwhile solution.

A critical decision for most students is the choice of an occupation. It will have great bearing on many, if not most, of their future activities. All too often, however, students reach vocational decisions on the basis of wholly inaccurate information obtained from unreliable sources. Counselors are confronted with far too many "high risk" students whose school and personal background information do not match well with their career plans (Cooley, 1964).

Decision theorists (Edwards, 1961; Cronbach & Gleser, 1965) and counseling researchers (Clark, Gelatt & Levine, 1965; Mehrens, 1966; Thoresen & Mehrens, 1967) have pointed out that investigating the ways in which individuals can be assisted to use relevant information remains a crucial problem. This study generated a sequence of procedures whereby subjects could learn to identify, gather and process information pertaining to their own plans. In effect the question was: What conditions would be most helpful for individuals in acquiring

"an effective strategy for analyzing, organizing and synthesizing information in order to make good decisions." (Clark, Gelatt & Levine, 1965, p. 41)

The study developed and experimentally evaluated a series of structured group stimulus materials and group social models for promoting career information-seeking and information-processing behaviors by high school students.

The objectives for the study were:

1. Explore competing treatments for assisting students to identify plans, gather relevant and reliable information, and consider tentative choices which will enable them to make use of these decision-making skills outside the counseling treatment setting.
2. Develop and assess the relative efficacy of: (a) a structured group interaction technique, (b) a video presented social modeling procedure, (c) a treatment which combines a modeling procedure and structured interaction.
3. Generate a body of data which will permit the stating and testing of subsequent research hypotheses thus contributing to the development of counseling theory.

Method

The design of this investigation is shown in Diagram 1. The independent variables for the study were counselor (2) and treatment (4). Dependent variables were scores on the following criterion measures administered before and after treatment: (a) Attitude Questionnaire, (b) Career Planning Inventory, (c) two tests of knowledge of information-seeking: Information-seeking Inventory, Part I, and Information-seeking Inventory, Part II, (d) A Vocational Planning Questionnaire.

Subjects

Diagram 2 illustrates the assignment of subjects to groups. The students participating in the study were all eleventh grade male students from three high schools in Evanston, Illinois. Since the three high schools are all located on one campus, all of the students involved in the project were participating in a single shared course in vocational experiences. Consequently these students were for the most part taking vocational classes in preparation for entering the world of work immediately upon graduation from high school. In the Fall of 1971, 40 students were selected from those taking the vocational experiences course, initially tested and randomly assigned to either one of the three treatment groups or the control group. Those students assigned to treatment groups were then further randomly assigned to either one of the two counselors such that each counselor had one group of five students in each treatment. Following the implementation of treatment these subjects were then posttested all during the Fall of 1971. In the following semester (Spring semester of 1972) an additional group of 40 students was selected, pretested, and randomly assigned to treatment groups. Treatments were administered and the subjects were posttested during Spring semester. Thus the total sample size for the study was 80 students.

Counselors

The treatment counselors were selected from among doctoral students in Counselor Education at Northwestern University. Each had experience running group treatments with high school students. Each counselor implemented one group in each of the three experimental treatments during both Fall and Spring semesters.

Treatments

As stated above this study included three experimental treatment groups and one wait control group. The experimental treatments were: (a) Structured group interaction, (b) Group social modeling, and (c) Group social modeling plus structured interaction.

Structured Group Interaction

Subjects in groups of five dealt with a series of materials over a period of five weeks. These materials were designed in such a way that the subjects were actively involved in listening, talking, writing, and enacting, decision making and information gathering behaviors through role playing. During each session the counselor verbally and nonverbally reinforced relevant participation.

First session. This session began with introduction of counselors and students, the counselors' statement of the purpose of the project and a brief summary of the activities involved. The counselor then turned to the discussion of the variety of job possibilities that exist in the world of work. Students spent some time reading and studying a list of different occupations noting those that they thought interesting. The final activity in this session involved students' attention to the student preference sheet. This sheet required students to express their preference regarding characteristic activities of different jobs. These characteristics concerned such factors as working in social situations versus work around machines, working in a variety of settings versus working in the same familiar surroundings, etc. For some categories such as pay, students were asked to state minimal levels which would be acceptable to them. Following work on the student preference sheet this treatment session was concluded.

Second session. The first activity in the second session required the students to chose three job alternatives that seemed interesting to them and which they wanted to investigate further. Once the three alternatives had been suggested the counselor initiated a discussion of questions which would be useful for acquiring information about these jobs. One of the topics covered by the counselor in this discussion was the criteria for good questions. These criteria included specificity, relevance, and asking the questions of reliable sources. Following this discussion the students were asked to develop as many questions as they could for one of the job alternatives. Next, students and the counselor spent some time discussing different modes of seeking answers to the questions. These modes include (1) observing workers on the job or observing occupational film; (2) reading vocational simulation kits or occupational brochures; (3) listening to audio tapes or other presentations that described jobs; (4) talking to counselors, teachers, or individuals employed on that particular job; (5) writing letters to offices of employment, specific firms and industries and offices of admissions to institutions of higher education and finally (6) visiting offices of factories, industrial plants, and/or college campuses. At the conclusion of this discussion subjects were given the assignment of seeking answers to the questions they had developed and bringing the answers to the third session.

Third session. At the start of this session the counselor briefly summarized the criteria for good questions and the modes for information seeking. Next the counselor moved to an extended discussion of the experiences each student had in seeking information and a consideration of the questions asked and information acquired for the first job alternative. A job information and evaluation form was used to organize the information. This third session was almost entirely consumed by consideration of information acquired by

subjects between the second and third sessions. However, prior to termination of the third session each subject was asked to select another of the three job alternatives and compose questions for information gathering about that job. Once these questions had been identified the subjects were asked to seek information related to these questions and bring it to the fourth session.

Fourth session. As in the third session the objective of the activities in the fourth session was to help subjects continue to process information and use it to evaluate desirability of the particular job alternative. Again the job information and evaluation form was used and each of the subject's questions and answers were discussed in turn by the total group.

Fifth Session. The major objective of this session was to bring closure to the decision making procedures of the previous four sessions. Initially the counselor handed back to the subjects their personal preference sheets and the career information forms that had been filled out in previous sessions. The subjects then turned to the evaluation columns in the information sheets and determined the desirability of each of the two alternatives that they had previously investigated. Each subject then discussed with the group his reactions to the two alternatives he had investigated and explained his evaluation of each alternative. Following this discussion the counselor summarized the activities in which subjects had been engaged and indicated that each subject had one alternative that he had not investigated and encouraged them to continue seeking information about jobs and terminated the treatment.

Group Social Modeling

Four high school juniors were selected from a neighboring high school not participating in the study. Based on the results of previous studies (Thoreson and Stuart, 1967; Thoreson, Hosford and Kumboldt, 1968) student models were selected who were highly successful academically, athletically, and socially in their school setting. These model students were trained in interacting as a group before a video camera. The students then produced five 20 to 30 minute sessions which paralleled the content of each of the five sessions in the structured interaction treatment. Thus a total of five video tapes were produced.

Subjects in the group social modeling treatment were brought into a classroom in which a video monitor had been set up. The subjects were given a sheet which highlighted the major parts of the session they were about to view. The video tape was then turned on and the subjects spent the next 20 to 30 minutes viewing the particular tapes of the appropriate session. Following the viewing of the tape the counselor went over the main points on the video tape with the students and then the subjects were dismissed. This procedure was followed once a week for five weeks thus covering all five sessions of the group social modeling treatment.

Group Social Modeling and Structured Interaction

The content and sequence of the sessions for the subjects in this treatment paralleled the first two treatment conditions. In contrast however the subjects in this treatment first observed the video models presented in the group social modeling treatment. Then the subjects spent approximately 20 minutes working in the structured interaction mode described in Treatment 1.

Hence the treatment combined observation of career decision making behaviors with an opportunity to actually perform them. Again subjects in this treatment were involved in one session per week for five weeks.

Wait Control (no treatment control)

This group provided conditions to evaluate the passage of time, current life experiences, expectancy of receiving treatment and repeated testing. The subjects were initially tested at the same time as subjects in other treatments were tested. They were then told that because of the counselor time limitations it would not be possible to provide counseling for them at that time but that in approximately six weeks they would be counseled. The wait control subjects completed all post-treatment assessments at the same time as the treatment subjects.

Instrumentation

A variety of measures were used in this study to assess treatment effects. These included a measure of students' attitudes toward planning and decision making, two measures of students' knowledge of decision making strategies, a measure of the information seeking in which the student had engaged, and finally a measure which assessed the students' ability to apply their knowledge of decision making strategies to a particular decision making situation.

Attitude Questionnaire. This instrument was designed to assess students' interest in various kinds of activities related to planning and decision making. Examples of the stems used are: scheduling to get things done, writing for job information, figuring out questions to ask about jobs, organizing job information, and thinking about what I am going to do after I get out of school. The questionnaire included 21 such stems. For each stem the

student was asked to indicate whether he was interested in the activity, whether he had no interest in the activity, or if he had no strong feeling one way or another about the activity. A total score was computed which indicated the strength of the individual's stated interest in decision making activities.

Career Planning Inventory. This inventory assessed the students' information seeking during the immediately preceding three week period. Consequently it was administered three weeks after the termination of treatments on the posttest. The sections of the Career Planning Inventory focussed on the number of occupations the student had been considering, the number of people with whom the student had interacted about job information, the number and kind of printed material the student had consulted in gathering information, the kinds of visits the student had made, and any on-the-job efforts the student had made to gain information about jobs. Again a total score representing the number of information seeking activities was computed for this questionnaire.

Vocational Information Survey: Part I and Part II. These two instruments were designed to be tests of the students' knowledge of decision making and information seeking strategies. The first survey, the Vocational Information Survey Part I, was a recognition test. The student completed eleven multiple choice items assessing his knowledge of methods for seeking information and processing this information. The Vocational Information Survey Part II was designed to assess the individual's recall of good decision making strategies, information seeking modes, and criteria for good questions. A total score was computed for each subject on each of the two measures.

Vocational Planning Questionnaire. This instrument presented the student with a simulated decision making situation. The student was asked to consider or pretend that he had become interested in the job of electronic technician. He was then asked to write questions he would use in seeking information, identify ways of gathering information, and in fact gather the information from an attached information packet on electronic technicians' work. Next the student was asked to compare his strengths and weaknesses with the characteristics of the job and make a decision with respect to how promising the job would be for him. On the basis of how well these questions were written, the information gathered, and the decision was made, a total score was computed for each student.

Results

Since the study included pretests and posttests on all dependent measures, and since counselors were one of the independent variables in the design, a number of preliminary analyses were performed to determine the nature of the final analysis for evaluating treatment effects. First, one way analyses of variance were performed on each pretest. These were utilized to determine whether the treatment and control groups differed significantly enough on pretest to warrant the use of analysis of covariance. Significant differences ($p < .05$) were found on both the Attitude Questionnaire and the Vocational Information Survey Part II. Thus, for these two measures analyses of covariance were used to evaluate treatment effects. Next 2 X 3 (two counselors X three treatments) analyses were computed on each dependent variable to identify any counselor main effects. No significant differences between counselors appeared thus permitting a collapsing of the design across counselors. Consequently the analyses for treatment effects were one way analyses of variance and one way analyses of covariance.

The major objective of this study was to investigate the relative effectiveness of different modes of teaching students decision making strategies for career planning. Although it was not possible, given the research to date, to state hypotheses concerning the relative effectiveness of different experimental treatments, it was possible to state an hypothesis regarding the experimental treatment's effectiveness as compared to that of no treatment in the control group. This hypothesis, then, was as follows:

> Students assigned to the three experimental treatments, (a) Structured Group Interaction, (b) Group Social Modeling, and (c) Group Social Modeling plus Structured Interaction, will emit more career decision making behaviors as assessed by the dependent measures than will equivalent students assigned to the control condition.

The analyses of variance and covariance tables for the five dependent variables are presented in Tables 1, 2, 3, 4, and 5. In addition, the means and standard deviations for each group and each variable are presented in Tables 6, 7, 8, 9, and 10. As these tables reveal the analyses produced no significant differences among groups on any of the five dependent measures ($\alpha = .05$). The Career Planning Inventory is the only dependent variable for which the F value even approached significance ($p = .08$, see Table 1) and for this variable the control group mean is the largest of the four means (see Table 6). Further inspection of the tables of means and standard deviations shows mixed results with no clear trends reflecting significant treatment effects.

Discussion

This study was designed as a replication of a previous project (Hamilton, 1969). As in the present study, Hamilton used a structured group interaction treatment, a group social modeling treatment, and a modeling plus interaction treatment. The dependent variables used by Hamilton were also similar to those used in this study, namely knowledge tests, and information seeking

inventories. However, Hamilton's study differed from this in that his project was implemented in three separate and disparate schools, and the treatment counselors were female rather than male. Thus in effect Hamilton ran three separate studies. Hamilton's results were mixed. In one school the group social modeling subjects showed more knowledge of and ability to simulate career decision making behaviors than control subjects. At another school group social modeling plus participation led to significantly greater frequency of career decision making behaviors than did the control treatments. In another school the structured interaction treatment showed more information seeking behaviors than did the control. Given these mixed results it was decided to try to implement a project similar to Hamilton's in just one school to enable a more thorough evaluation of treatment effects separate from differences due to disparate subject populations.

While the results of the Hamilton study were at least suggestive of some possible treatment effects, the data from the present study show virtually no evidence of positive changes due to treatment. Certainly one could rationalize these results in terms of such factors as (a) inaccurate dependent measures, that is measures not completely assessing possible treatment effects, (b) lack of subject motivation, namely the fact that since subjects in the study were also enrolled in the Vocational Experience class, they in fact had already been exposed to the kinds of material dealt with in the treatment, and therefore were not receptive to treatment procedures, and (c) insufficient treatment time, namely a need for more or longer treatment sessions in order to effect change in subjects.

The fact is, however, that now in two studies using essentially the same treatment procedures no clear evidence of uniform positive treatment effects

has been demonstrated. These results must be faced with an eye toward identifying reasons why these treatments have not been effective so that new procedures can be developed which will have the necessary power to effect positive change.

The most promising approach to identifying treatment procedures with power to produce needed changes is to attend to the question: "What treatment, by whom, is most effective with this individual with that specific problem under which set of circumstances?" (Thoresen, 1966). This question implies that in preparing treatments we should attend not to procedures focused on the average or prepared to suit the average person but rather treatments designed for groups or individuals with particular aptitude patterns. Thus the attempt would be to determine what kinds in individuals learn best from video tape modeling treatments and what kinds of individuals learn best from structured interaction approaches. In fact anticipating this kind of problem, the present study did employ predictor variables. Each subject was assessed as to his personality, introversion, extroversion, and to his internal locus of control. These data when analyzed should provide some indication as to whether or not personality characteristics can be used to identify individuals who can most beneficially learn from treatment procedures using different modes of presentation. Thus the next step in this research effort will be to begin to attempt to identify such characteristics and their predictive power vis a vis treatment effects rather than continuing an attempt to assess what kinds of procedures are most effective on the average with groups.

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Table 1

Analysis of Variance of the
Career Planning Inventory
Total Score

Source of variation	df	M S	F value
Treatment	3	387.727	2.358*
Error	62	164.451	

* p = .08

Table 2

Analysis of Variance of the

Vocational Information Survey Pt. I

Total Score

Source of variation	df	M S	F value
Treatment	3	5.1742	0.7884*
Error	62	6.5632	

*p = .50

Table 3

Analysis of Variance of the

Attitude Questionnaire

Total Score

Source of variation	df	M S	F value
Treatment	3	98.8685	1.3095*
Error	61	75.5034	

* p = .27

Table 4

Analysis of Variance of the

Vocational Information Survey Pt. II

Total Score

Source of variation	df	M S	F value
Treatment	3	8.9613	0.5650*
Error	61	15.8604	

* p = .64

Table 5

Analysis of Variance of the

Vocational Planning Questionnaire

Total Score

Source of variation	df	M S	F value
Treatment	3	46.6617	0.9702*
Error	62	48.0962	

* p = .41

Table 6

Means and Standard Deviations for all groups on the Career Planning Inventory Pre and Posttest

Treatment condition	Pretest		Posttest	
	M	SD	M	SD
Structured Group Interaction	14.33	15.16	12.83	6.51
Group Social Modeling	17.41	20.08	9.88	5.15
Modeling plus Interaction	11.00	7.17	11.86	6.94
Wait Control	17.50	14.11	21.00	23.63

Table 7

Means and Standard Deviations for all groups
on the Vocational Information Survey Pt. I
Pre and Posttest

Treatment condition	Pretest		Posttest	
	M	SD	M	SD
Structured Group Interaction	8.39	15.77	4.67	2.70
Group Social Modeling	5.35	2.09	4.53	2.38
Modeling plus Interaction	4.07	2.05	3.73	2.37
Wait Control	5.06	2.29	5.12	2.75

Table 8

Means and Standard Deviations for all groups

on the Attitude Questionnaire

Pre and Posttest

Treatment Condition	Pretest		Posttest	
	M	SD	M	SD
Structured Group Interaction	34.72	13.88	42.05	4.22
Group Social Modeling	44.24	7.95	42.53	5.64
Modeling plus Interaction	45.99	4.02	38.87	12.70
Wait Control	44.37	6.74	40.62	12.27

Table 9

Means and Standard Deviations for all groups on the Vocational Information Survey Pt. II Pre and Posttest

Treatment Condition	Pretest		Posttest	
	M	SD	M	SD
Structured Group Interaction	3.00	2.95	4.72	4.11
Group Social Modeling	1.35	2.21	4.24	3.61
Modeling plus Interaction	4.53	2.56	6.27	4.61
Wait Control	3.63	4.06	4.25	3.98

Table 10

Means and Standard Deviations for all groups

on the Vocational Planning Questionnaire

Pre and Posttest

Treatment condition	Pretest		Posttest	
	M	SD	M	SD
Structured Group Interaction	8.78	9.40	11.33	7.53
Group Social Modeling	10.53	4.33	11.47	6.15
Modeling plus Interaction	9.53	4.85	8.47	6.43
Wait Control	8.63	6.64	8.50	7.46

Diagram 1

Project Design with Number of Subjects per Group

	Counselor 1		Counselor 2	
	Group 1	Group 2	Group 1	Group 2
Treatment 1 Structured Group Interaction	5	5	5	5
Treatment 2 Group Social Modeling	5	5	5	5
Treatment 3 Modeling plus Interaction	5	5	5	5
Wait Control		20		

Diagram 2

Assignment of Subjects to Groups